

**GENE TARGETING IN ANIMAL CELLS
USING ISOGENIC DNA CONSTRUCTS**

ABSTRACT OF THE DISCLOSURE

5 The present invention provides novel methods for
modifying the genome of an animal cell which typically comprise
the steps of: constructing a DNA molecule in which desired
sequence modifications are contained in a segment of DNA (a
"targeting DNA") that is substantially isogenic with a DNA in
10 the cell genome (a "target DNA"); introducing the targeting DNA
construct into the cell (e.g., by microinjection,
electroporation, transfection, or calcium phosphate
precipitation); and selecting cells in which the desired
sequence modifications have been introduced into the genome via
15 homologous recombination.